

Reply to Office Action dated April 18, 2007

REMARKS

Claims 1-24 and 27-31 are pending in this application. By this Amendment, claims 1-2, 11, 13-14, 16, 20-24 and 28 are amended. Various amendments are made for clarity and are unrelated to issues of patentability.

Entry of the amendments is proper under 37 C.F.R. §1.116 because the amendments: (1) place the application in condition for allowance; (2) do not raise any new issues requiring further search and/or consideration; and/or (3) place the application in better form for appeal, should an appeal be necessary. More specifically, the above amendments are merely for clarity and do not raise any new issues. Entry is thus proper under 37 C.F.R. §1.116.

Applicants gratefully acknowledge the Office Action's indication that claims 3-5, 9-10 and 15 contain allowable subject matter. However, as will be described below, all claims are believed to be allowable.

The Office Action rejects claims 1, 2, 11-14, 16-22 and 24 and 27-31 under 35 U.S.C. §102(e) by U.S. Patent 6,850,771 to Malladi et al. (hereafter Malladi). The Office Action also rejects claims 6-8 and 23 under 35 U.S.C. 103(a) over Malladi in view of U.S. Patent 6,603,980 to Kitagawa et al. (hereafter Kitagawa). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites temporarily increasing a power of a general control channel to a power level requested to demodulate a specific control channel if transmission of the specific control channel signal is executed, and decreasing the increased power to meet a power

Reply to Office Action dated April 18, 2007

level requested by a current general control channel transmission if the specific control channel transmission is completed.

The present specification relates to temporarily increasing the power level of a control channel when HS-DPCCH transmission begins, and then immediately reducing such increased power level when HS-DPCCH transmission is completed, regardless of any “link imbalance”.

In contrast, Malladi relates to “general” power control concepts that requires a Node B 104, 106 to monitor a pilot signal strength in order to determine whether to send transmit power level increase or decrease commands to UE 102. See Malladi’s col. 2, lines 14-26. However, such general power control concepts do not teach or suggest temporarily increasing the power level to allow high-speed control channel transmission. For example, the power control method discussed in the present specification depends upon start and completion of the desired high-speed control channel transmission.

Malladi recognizes that reduction of pilot signal transmit power by the UE 102 can affect the uplink high speed communications between the UE 102 and the Node-B 104, 106 because the signal strength of HS-DPCCH will be reduced in proportion to a reduction of the pilot signal strength in accordance with the traffic-to-pilot ratio stored in the UE 102. See Malladi’s col. 2, lines 40-45. However, this leads to a “link imbalance” condition, which Malladi resolves by having an RNC monitor the pilot signal strength (in terms of certain parameters), and these parameters are used in determining whether to increase or decrease the target pilot SNR threshold T. See Malladi’s col. 3, lines 12-17.

Accordingly, Malladi relates to a general uplink power control method that is performed “indirectly” and requires an undesirably long time to perform and complete. Also, Malladi’s power control may resolve a link imbalance condition during HS-DPCCH transmission. Malladi does not specify a particular duration of performing such uplink power control.

Additionally, Malladi suffers from drawbacks identified in the Background Art of the present specification. That is, in Malladi, because the power is not “re-adjusted” for a predetermined time (or is not “temporarily increasing...” or is not “forcibly decreasing ...”) despite the completion of HS-DPCCH signal transmission, the power of the DPCCH is unnecessarily maintained high. See the paragraphs bridging pages 11-12 and the paragraphs on page 12 of the present specification.

Independent claim 1 recites temporarily increasing a power of a general control channel. For at least the reasons set forth above, Malladi does not teach or suggest at least these features of independent claim 1. Kitagawa does not teach or suggest the features of independent claim 1 missing from Malladi. Thus, independent claim 1 defines patentable subject matter.

Independent claim 16 recites applying a second power control method to the DPCCH transmission for at least a K_{algo1} number of slots upon completion of high speed dedicated physical control channel (HS-DPCCH) transmission. For at least similar reasons as set forth above, the applied references do not teach or suggest at least these features of independent claim 16. Thus, independent claim 16 defines patentable subject matter.

Still further, independent claim 20 recites forcibly decreasing the second uplink transmission power back to the first uplink transmission power after transmission of the high

Serial No. **10/700,041**
Reply to Office Action dated April 18, 2007

Docket No. **P-0613**

speed control channel is completed. For at least similar reasons as set forth above, the applied references do not teach or suggest at least these features of independent claim 20. Thus, independent claim 20 defines patentable subject matter.

Independent claim 28 recites re-adjusting the uplink transmission power from the second power level to the first power level after completing transmission on the high-speed control channel. For at least similar reasons as set forth above, the applied references do not teach or suggest at least these features of independent claim 28. Thus, independent claim 28 defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1, 16, 20 and 28 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-24 and 27-31 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

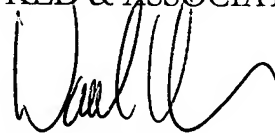
Serial No. **10/700,041**

Docket No. **P-0613**

Reply to Office Action dated April 18, 2007

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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